

100-1454

9/9/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

SEP 09 2014

Teresa Cox  
Regulatory Product Manager  
Regulatory Affairs Department  
Syngenta Crop Protection, LLC  
410 Swing Road  
Greensboro, NC 27419

Subject: R350 to Add Chemigation for Ornamentals and Expand Aerial Applications  
Product Name: Cannonball WG  
EPA Registration Number: 100-1454  
Application Date: 11/21/2013  
Decision Number: 485303

Dear Ms. Cox:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). If you have any questions, please contact Erin Malone by phone at (703) 347-0253, or via email at malone.erin@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Shaja B. Joyner".

Shaja B. Joyner, Product Manager 20  
Fungicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

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**GROUP 12 FUNGICIDE**

**Cannonball® WG**

**Fungicide**

Active Ingredient:	
Fludioxonil (CAS No. 131341-86-1).....	50.0%
Other Ingredients:	50.0%
Total:	100.0%

Cannonball WG is a 50% water dispersible granule.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1454

EPA Est.

Net Weight: \_\_\_\_\_

**ACCEPTED  
SEP 09 2014**

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

EPA Reg. No: 100-1454

<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>NOTE TO PHYSICIAN</b>	
If ingested, induce emesis or lavage stomach. Treat symptomatically.	
<b>HOT LINE NUMBER</b>	
For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

**CAUTION**

Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

## **Personal Protective Equipment (PPE)**

**Handlers applying this product as a preplant dip to roots and crowns and workers packaging or preparing treated roots and crowns for shipment must wear:**

- Chemical-resistant apron made of any waterproof material
- Elbow-length chemical-resistant gloves made of any waterproof material (such as Natural Rubber, Selection Category A)
- Chemical-resistant boots made of any waterproof material

**All other applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made from any waterproof material (such as Natural Rubber, Selection Category A)
- Shoes plus socks
- Protective eyewear such as goggles or face shield

**In addition, mixers and loaders for aerial, groundboom, and chemigation applications must wear:**

- Filtering facepiece respirator (N95, R95, or P95) (e.g., a dustmask)

### **User Safety Requirements**

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### **Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

## **User Safety Recommendations**

### **Users should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove and wash contaminated clothing before reuse.

## **Environmental Hazards**

This pesticide is toxic to fish, aquatic invertebrates, oysters and shrimp. For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsates.

## **Ground Water Advisory**

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## **Surface Water Advisory**

This chemical may contaminate water through drift of spray in wind. This chemical has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this chemical. A level, well-maintained vegetative buffer strip between areas to which this chemical is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this chemical will be reduced by avoiding applications when conditions favor runoff (such as when soils are saturated and/or significant rainfall is forecast in the next 48 hours). Sound erosion control practices will reduce this chemical's contribution to surface water contamination.

## **Physical or Chemical Hazards**

Do not use or store near heat or open flame. Do not use with or store near any oxidizing agents.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR DISEASE CONTROL.**

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.**

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks

**Do not formulate this product into other end-use products.**

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**PRODUCT INFORMATION**

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Cannonball WG is a protective fungicide used to aid in the control of soil, crown, and foliar diseases. All applications must be made according to the use directions that follow.

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**PRODUCT USE INSTRUCTIONS**

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**Nassau and Suffolk counties of New York:** Use limited to strawberries and onions.

**Not for use in the state of Hawaii.**

**Application:** Thorough coverage is necessary to provide good disease control. Make up no more spray solution than is needed for application. Avoid spray overlap, as crop injury may occur.

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if maximum amount of Cannonball WG has been used. If resistant isolates to Group 12 fungicides are present, efficacy can be reduced. Under high disease pressure, it is recommended to use the highest rate and shortest interval.

**Rotational Crops:** Do not plant any crop which is not registered for use with fludioxonil for a period of 30 days, unless a shorter interval is specified on the following list.

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Rotation Crop	Planting Time From Last Cannonball WG Application
Beans (dried and succulent except cowpeas)* Berries (bushberries 13-07B, caneberries 13-07A)* Brassica (Cole) Leafy Vegetables Carrot Cucurbits* Ginseng Herbs (fresh and dried)* Leafy Vegetables* Melons Onions (dry bulb 3-07A, including garlic and green 3-07B) Peppers Root and Tuber Vegetables, except Sugar Beet* Root and Tuber Vegetables, Leaves* Strawberries Tomatoes Watercress Crops Not Intended for Food or Feed	0 days
All Other Crops Intended for Food or Feed	30 days

\*See the complete crop lists for these groups in CROP USE DIRECTIONS.

In annual crops where multiple crops can be grown per year (double/triple cropping), do not apply more than 0.9 lb. a.i. fludioxonil/A/year to an individual plot of land, except for ginseng and onions at 1.0 lb. a.i fludioxonil/A/year.

**Crop Tolerance:** Plant tolerance has been found acceptable for all crops on the label, however, not all possible tank-mix combinations have been tested under all conditions. When possible it is recommended to test the combinations on a small portion of the crop to ensure a phytotoxic response will not occur as a result of application.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment and weather related factors determine the potential for spray drift. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER.

**Adjuvants:** When an adjuvant is to be used with this product, Syngenta recommends the use of a Chemical Producers and Distributors Association certified adjuvant unless otherwise restricted for a specific crop.

**IPM:** Cannonball WG should be integrated into an overall disease and pest management strategy (IPM) whenever the use of a fungicide is required. Cultural and

sanitation practices known to reduce disease development should be followed. Consult your local agricultural authorities for additional IPM strategies established for your area.

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## RESISTANCE MANAGEMENT

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Cannonball WG contains fludioxonil which is in the phenylpyrrole class of chemistry and has a unique mode of action, which prevents fungal respiration [Fungicide Action Group 12]. Fungal isolates with acquired resistance to Group 12 may eventually dominate the fungal population if Group 12 fungicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by fludioxonil or other Group 12 fungicides. A disease management program that includes alternation or tank mixes between Cannonball WG and other labeled fungicides that have a different mode of action may prevent pathogen populations from developing resistance. Sanitation and other cultural practices to minimize disease are also recommended to aid in control as well as to assist in preventing/delaying resistance development.

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## SPRAY EQUIPMENT

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### Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- As appropriate, nozzles should be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- Screens placed on suction side of pump should be *16-mesh or coarser*.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's recommendations.

### Pump

- Use a pump with capacity to:
  - (1) Maintain sufficient pressure at the nozzle tip to give the required flow rate and droplet size to provide acceptable coverage of the target crop.
  - (2) Provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

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## MIXING INSTRUCTIONS

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- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- Agitate the spray solution before and during application.
- Do not let the spray mixture stand overnight in the spray tank.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

### Cannonball WG Alone (no tank mix):

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add Cannonball WG to the tank.
- Continue agitation while adding the remainder of the carrier.
- Begin application of the spray solution after Cannonball WG has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

**Cannonball WG + Tank Mixtures:** Cannonball WG is usually compatible with all tank-mix partners. To determine the physical compatibility of Cannonball WG with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

### Mixing in the Spray Tank

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- Allow Cannonball WG to completely dissolve and disperse.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water to the spray tank.
- Spray the mixture with the agitator running.
- Observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank-mix product label.
- Label dosage rate must not be exceeded, and the most restrictive label precautions and limitations must be followed.

- This product must not be mixed with any product which prohibits such mixing.

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## **APPLICATION PROCEDURES**

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### **OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS, ESTUARIES, AND COMMERCIAL FISH FARM PONDS.**

- Do not apply within 75 ft. of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes, or estuaries.
- Shut off the sprayer when at row ends.
- Do not cultivate within 10 ft. of aquatic areas as to allow a vegetative filter strip.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.
- For perennial crops such as tree crops and grapes:
  - For all plantings within 150 ft. of bodies of water as described above, spray crops from outside the planting away from the bodies of water.
  - Spray last three rows windward of aquatic areas using nozzles on one side only, with spray directed away from aquatic areas. Adjust or turn off top nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of row or passing tree gaps in the rows.

### **Ground Application**

- Apply in a minimum of 10 gal. of water per acre, unless specified otherwise.

### **Aerial Application**

#### **Aerial Spray Recommendations and Precautions**

- Use only on crops where aerial applications are indicated.
- Avoid applications under conditions when uniform coverage cannot be obtained or when excessive drift may occur. Observe the following precautions when spraying in the vicinity of aquatic areas such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.
- Do not apply by air within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds, estuaries, and commercial fish ponds.
- Mount the spray boom on the aircraft so as to minimize the drift caused by wing tip vortices. Use the minimum practical boom length, and do not exceed 75% of wing span or rotor diameter.
- Use the largest droplet size consistent with good pest control.

- Formation of very small droplets may be minimized by appropriate nozzle selection, by orientating nozzles away from air stream as much as possible, and by avoiding excessive spray boom pressure.
- Release the spray at the lowest height consistent with pest control and flight safety.
- Avoid applications more than 10 ft. above the crop canopy.
- Reduce risk of exposure to aquatic areas by avoiding applications when wind direction is toward the aquatic area.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood on increased spray drift to aquatic area. Avoid spraying during conditions of low humidity and/or high temperatures.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.
- For the crops to which aerial applications are allowed, refer to the specific crop directions for use.
- Apply in a minimum of 5 gal. of water per acre, unless specified otherwise.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.
- Do not apply directly to humans or animals.

#### **Application Through Irrigation Systems (Chemigation)**

- Use only on crops for which chemigation is specified on this label.
- Apply this product only through drip, microjet, center pivot, solid set, hand move, and moving wheel irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- Apply in 0.125-0.25 inches/A of water. Excessive water may reduce efficacy.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

#### **Operating Instructions**

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended.

### **Center Pivot Irrigation Equipment**

**Notes:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Cannonball WG through center pivot systems because of non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply  $\frac{1}{8}$ - $\frac{1}{2}$  inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. When applying Cannonball WG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Cannonball WG required to treat the area covered by the irrigation system.
- Add the required amount of Cannonball WG and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the Cannonball WG solution. Time the injection to last at least as long as it takes to bring the system to full pressure.

- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Cannonball WG solution has cleared the sprinkler head.

### **Solid Set, Hand Move, and Moving Wheel Irrigation Equipment**

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying Cannonball WG through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Cannonball WG required to treat the area covered by the irrigation system.
- Add the required amount of Cannonball WG into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Cannonball WG solution has cleared the last sprinkler head.

### **Drip or Microjet Chemigation Systems**

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

**Spray Preparation:** Chemical tank and injector system should be thoroughly cleaned. Flush system with clean water.

### **Use Precautions for Drip or Microjet Irrigation Applications**

**Drip or Microjet Irrigation:** Cannonball WG may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

- Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, subsequent irrigation (water only) should be delayed for at least for 24 hours following drip application.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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#### **SPECIFIC INSTRUCTIONS FOR PUBLIC WATER SYSTEMS**

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1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

**CROP USE DIRECTIONS – SOIL APPLIED OR SOIL DIRECTED**

Crop	Disease	Rate oz./Acre	Remarks
<b>Bulb Vegetables Crop Group</b> <b>3-07A and 3-07B</b> <b>(In-Furrow)</b>  Garlic Onion, Bulb Onion, Green Onions Grown for Seed  And cultivars and/or hybrids of these.	<b>Soil-Borne diseases</b> White rot <i>(Sclerotium cepivorum)</i>	3.5 - 7 (0.25-0.5 oz./ 1,000 ft.row)	Apply at the time of planting as an in-furrow spray prior to seed placement.

**Complete List of Bulb Vegetables:** Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves

**Specific Use Restrictions**

- 1) Application may be made by ground only.
- 2) Do not apply more than 32 oz./A of Cannonball WG per acre per year.
- 3) Do not apply more than 0.68 lb ai (21.7 oz) per acre per application.
- 4) Do not apply more than 1.0 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 5) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./100 gal.	Remarks
<b>Bushberries Subgroup 13-07B</b>  Blueberry: high & low bush Highbush cranberry Black currant Red currant Elderberry Native currant	Cylandrocladium root rot ( <i>Cylandrocladium parasiticum</i> )  Rhizoctonia root rot ( <i>Rhizoctonia</i> spp.)	1 - 2	<b>Propagation Use</b> Apply Cannonball WG at the rate of 1 - 2 oz. per 100 gallons of water. Apply 1 - 2 pints of fungicide solution per square foot of propagation bed so as to thoroughly wet the root zone. Apply prior to or at the time of sticking cuttings and at 2- to 4-week intervals as needed. Cannonball WG may be applied to propagation beds through drip or sprinkler irrigation systems.  <b>Field-Use</b> Apply Cannonball WG at the rate of 1 - 2 oz. per 100 gallons of water and apply 1 - 2 pints around the base of each plant. Apply no more than 7 oz./A per application. Cannonball WG may be applied to production plantings through drip irrigation.

**Complete List of Bushberries:** Aronia berry, Black currant, Blueberry high and low bush, Buffalo currant, Chilean guava, Edible honeysuckle, Elderberry, European barberry, Gooseberry, Highbush cranberry, Huckleberry, Jostaberry, Juneberry (Saskatoon berry), Lingonberry, Native currant, Red currant, Salal, Sea buckthorn

**Specific Use Restrictions**

- 1) Do not apply more than 8 oz. of Cannonball WG per acre per application in the greenhouse.
- 2) Do not apply more than 7 oz. of Cannonball WG per acre per application in the field.
- 3) Do not apply more than 29 oz. of Cannonball WG per acre per year.
- 4) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 5) May be applied on the day of harvest (0-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
Ginseng	<p>Cylindrocarpon root rot (<i>Cylindrocarpon destructans</i>)</p> <p>White mold (<i>Sclerotinia sclerotiorum</i>)</p>	4 - 8	<p>Apply Cannonball WG through drip irrigation or drenching to the root zone of the treated acre at a 14-21 day interval.</p> <p>Apply 4 – 8 oz. Cannonball WG per acre. Apply in 100 to 200 or more gallons of water per acre to obtain thorough coverage and penetration to the soil and root zone.</p> <p>Repeat applications at 14-day intervals if conditions continue to be favorable for disease development.</p>

**Specific Use Restrictions**

- 1) Do not apply more than 32 oz. (1.0 lb. ai/A) of Cannonball WG per year.
- 2) Do not apply within 14 days of harvest (14-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Melons</b></p> <p>Cantaloupe Honeydew Watermelon</p> <p>And cultivars and/or hybrids of these.</p>	<p>Suppression of:</p> <p>Vine Decline (<i>Monosporascus cannonballus</i>)</p>	<p>4 - 8</p>	<p>Apply Cannonball WG prior to planting or transplanting in a 16-inch band shanked in with four fertilizer knives per bed or through the drip tape. Make additional applications starting at 21 days after planting or 7 days after transplanting via the drip tape. Continue via the drip tape every 14-21 days if conditions favor disease development. Make up to 3 applications at 8 oz./A or 6 applications at 4 oz./A.</p> <p>Apply through drip irrigation to provide a root-zone of treated area. Due to limited movement of Cannonball WG in the soil, it is best to place the drip irrigation line directly below the plants and no more than 4 inches deep.</p>

**Complete List of Melons:** Citron melon, muskmelon, true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and watermelon. Includes hybrids and/or varieties of *Cucumis melo* and *Citrullus lanatus*.

**Specific Use Restrictions**

- 1) Do not apply more than 24 oz. (0.75 lb. ai/A) per year.
- 2) Do not apply within 14 days of harvest (14-day PHI).

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**CROP USE DIRECTIONS – DIP/CROWN TREATMENTS**

Crop	Disease	Rate oz./Acre	Remarks
<b>Strawberries (Pre-plant dip)</b>	Root and crown anthracnose at planting ( <i>Colletotrichum</i> spp.)	2.5 - 4 oz. per 100 gal. water	<p>Apply as a preplant dip to strawberry roots and crowns at the rate of 2.5 to 4 oz. per 100 gal. of water for suppression of root and crown rot caused by anthracnose. Wash transplants to remove excess soil prior to dipping. This helps to remove adhering spores from the external plant parts. Completely immerse planting stock in dip solution. Dip or expose plants for a minimum of 2 to 5 minutes. DO NOT reuse solution. Dispose of dip solution according to local regulations.</p> <p>Plant treated plants as quickly as possible. For continued anthracnose control, follow with foliar applications beginning 2-3 weeks after transplant.</p>

**Specific Use Restrictions**

- 1) Do not apply more than 28 oz./A of Cannonball WG per year.
- 2) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.

**CROP USE DIRECTIONS – FOR FOLIAR APPLIED**

When a range of rates is provided, use the higher rates if weather conditions are conducive for higher disease pressure.

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Beans (Dried and Succulent except cowpeas)</b></p> <p>Chickpea (garbanzo bean) Bean (<i>Lupinus</i> spp.) (grain lupin, sweet lupin, white lupin, white sweet lupin) Bean (<i>Phaseolus</i> spp.) (kidney, lima, mung, navy, pinto, snap, wax) Broad Bean (fava bean) Bean (<i>Vigna</i> spp.) (asparagus, blackeyed pea)</p>	<p>White Mold (<i>Sclerotinia sclerotiorum</i>)</p> <p>Gray Mold (<i>Botrytis cinerea</i>)</p>	<p>5.5 - 7</p>	<p>Begin applications prior to or at the onset of disease and repeat applications on a 7-day interval if conditions remain favorable for disease development.</p> <p>For White Mold control, make the first application at 10-20% bloom. In some locations a single application at this timing will provide adequate disease control.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

Application Instructions: Application may be made by ground air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
<b>Berries</b>  <b>Bushberry Subgroup 13-07B</b>	Mummy berry <i>(Monilinia vacciniicorymbosi)</i>	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.
Blueberry Currant  <b>Caneberry Subgroup 13-07A</b> Blackberry Red and Black Raspberry	Anthracnose <i>(Colletotrichum spp.)</i>  Alternaria fruit rot <i>(Alternaria tenuissima)</i>		Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.
And cultivars and/or hybrids of these.	Phomopsis <i>(Phomopsis vaccinii)</i>  Botrytis Fruit Rot <i>(Botrytis cinerea)</i>		

**Complete List of Bushberries and Caneberries:**

**Bushberries:** Aronia berry, Black currant, Blueberry high and low bush, Buffalo currant, Chilean guava, Edible honeysuckle, Elderberry, European barberry, Gooseberry, Highbush cranberry, Huckleberry, Jostaberry, Juneberry (Saskatoon berry), Lingonberry, Native currant, Red currant, Salal, Sea buckthorn  
**Caneberries:** Blackberry, Loganberry, Red and Black Raspberry, Wild raspberry

Application Instructions: Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
<b>Brassica (Cole) Leafy Vegetables</b>  Broccoli Brussels sprouts Cabbage Cauliflower Collards Kale Mustard greens  And cultivars and/or hybrids of these.	Alternaria leaf blight ( <i>Alternaria</i> spp.)  Suppression: Cercospora leaf spot ( <i>Cercospora brassicicola</i> )	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

**Complete List of Brassica (Cole) Leafy Vegetables:** Broccoli; Broccoli, Chinese; Broccoli raab; Brussels sprouts; Cabbage; Cabbage, Chinese; Cauliflower; Cavalo broccoli; Collards; Kale; Kohlrabi; Mizuna; Mustard greens; Mustard spinach; Rape greens; Turnip greens

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not use roots of treated turnips for food or feed. Only turnip varieties harvested for their leaves may be treated.
- 3) Do not apply more than 28 oz./A of Cannonball WG per year.
- 4) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 5) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Bulb Vegetables</b> <b>Crop Group 3-07A and 3-07B</b></p> <p>Garlic Onion, Bulb Onion, Green Onions Grown for Seed</p> <p>And cultivars and/or hybrids of these.</p>	<p>Botrytis leaf blight or blast (<i>Botrytis</i> spp.)</p> <p>Stemphylium leaf blight (<i>Stemphylium vesicarium</i>)</p> <p>Purple Blotch (<i>Alternaria porri</i>)</p> <p>Suppression: Neck rot (<i>Botrytis</i> spp.)</p> <p>Black Mold (<i>Aspergillus niger</i>)</p>	<p>5.5 - 8</p>	<p>Begin applications when conditions become favorable for disease but before infection. If favorable conditions persist, make additional applications on a 7-10 day interval.</p> <p>For optimal effect on neck rot, apply on a 7-day schedule at the 8 oz. rate.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

**Complete List of Bulb Vegetables:**

**Bulb Onion:** Chinese onion; Dry Bulb onion; Daylily bulb; Fritillaria bulb; Garlic; Great-headed garlic; Lily bulb; Pearl onion; Potato onion; Serpent garlic; Shallot;

**Green Onion:** Beltsville bunching onion; Chinese chive fresh leaves; Fresh chive leaves; Fritillaria leaves; Fresh onion; Green onion; Hosta elegans; Kurrat; Lady's leek; Leek; Macrostem onion; Shallot fresh leaves; Tree tops onion; Welsh onion tops; Wild leek

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 32 oz./A of Cannonball WG per year.
- 3) Do not apply more than 1.0 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
Carrot	Alternaria leaf blight ( <i>Alternaria dauci</i> )	5.5 -7	<p>Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
Citrus  Lemon Lime	Alternaria Stem End Rot ( <i>A. citri</i> )  Anthracnose ( <i>Colletotrichum</i> , <i>gloeosporioides</i> )  Blue Mold ( <i>Penicillium</i> <i>italicum</i> )  Green Mold ( <i>Penicillium</i> <i>digitatum</i> )	5.5-7	Make one application near harvest to prevent post-harvest fruit rot. The application may be made up to and including the day of harvest.

**Specific Use Restrictions**

- 1) Application may be made by ground only.
- 2) Do not apply more than 7 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 0.22 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Cucurbits</b></p> <p>Cantaloupe Cucumber Honeydew Muskmelon</p> <p>Watermelon Pumpkin Squash Zucchini</p> <p>And cultivars and/or hybrids of these.</p>	<p>Alternaria Leaf Blight (<i>A. cucumerina</i>)</p> <p>Alternaria Leaf Spot (<i>A. alternata</i>)</p>	<p>5.5-7</p>	<p>Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

**Additional List of Cucurbits:** Cantaloupe; Chayote; Chinese waxgourd; Cucumber; Gourds; Honeydew; *Momordica* spp. (Bitter melon, Balsam apple); Muskmelon; Pumpkin; Squash; Watermelon; Zucchini

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied up to 1 day before harvest (1-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Tomatoes and Fruiting Vegetables Crop Group 8-10</b>  Eggplant Okra Pepper, bell Pepper, nonbell Tomato  And cultivars and/or hybrids of these.	Early Blight <i>(Alternaria solani)</i>  Grey Mold <i>(Botrytis cinerea)</i>	5.5-7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

**Complete List of Fruiting Vegetable Crop Group 8-10:** African eggplant; Bush tomato; Cocona; Currant tomato; Eggplant; Garden huckleberry; Goji berry; Groundcherry; Martynia; Naranjilla; Okra; Pea eggplant; Pepino; Pepper, bell; Pepper, nonbell; Roselle; Scarlet eggplant; Sunberry; Tomatillos; Tomato; Tree tomato

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).
- 5) **Do not apply to small tomatoes such as cherry or grape type tomatoes in the greenhouse.**

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Crop	Disease	Rate oz./Acre	Remarks
<p><b>Grapes and Small Fruit Vine Climbing Subgroup 13-07F (except fuzzy kiwifruit)</b></p> <p><b>Grapes</b> Amur river grape Hardy kiwifruit Maypop Schisandra berry</p> <p>And cultivars and/or hybrids of these.</p>	<p>Botrytis (grey mold) (<i>B. cinerea</i>)</p> <p>Sour rot (caused by a fungal complex)</p>	<p>5.5-7</p>	<p>Begin applications of Cannonball WG at early bloom. Up to three additional applications may be made at berry touch, veraison, or preharvest. Botrytis bunch rot is most effectively controlled by ground application, using sufficient water volume to provide thorough coverage. Thorough coverage of bunches is essential. Do not apply closer than a 21-day interval.</p> <p>For sour rot, make an application at veraison followed by 1-2 additional applications. Do not apply closer than a 21-day interval.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

Application Instructions: Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Herbs</b> (Dried and fresh)  See list below	Alternaria leaf spot ( <i>Alternaria</i> spp.)  Botrytis leaf blight ( <i>Botrytis</i> spp.)  Fusarium blight ( <i>Fusarium</i> spp.)	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.  Apply in a minimum spray volume of 30 gal./A to obtain thorough coverage.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

**Dried and Fresh Herbs Include:** Angelica, Balm, Basil, Borage, Burnet, Chamomile, Catnip, Chervil, dried leaves, Chives, Clary, Coriander, leaves (cilantro), Costmary, Culantro, leaves, Curry, leaves, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage, leaves, Marigold, Marjoram, Nasturtium, Parsley, dried leaves, Pennyroyal, Rosemary, Rue, Sage, Savory, summer and winter, Sweet bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Leafy Greens Subgroup 4A (except Brassica) and Leaf Petioles Subgroup 4B</b> Arugula Celery Lettuce, head and leaf Parsley Spinach</p> <p>And cultivars and/or hybrids of these.</p>	<p>Alternaria leaf spot (<i>Alternaria</i> spp.)</p> <p>Septoria leaf spot (<i>Septoria lactucae</i>)</p> <p>Gray mold (<i>Botrytis cinerea</i>)</p> <p>Sclerotinia rot (<i>Sclerotinia</i> spp.)</p> <p>Basal rot (<i>Phoma exigua</i>)</p>	<p>5.5 - 7</p>	<p><b>For foliar diseases</b>, begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.</p> <p><b>For soil-borne disease:</b></p> <p>Direct Seeded lettuce: Apply immediately after emergence or prior to disease development.</p> <p>Transplanted lettuce: Apply immediately after transplanting or prior to disease development.</p> <p>A second application should be made if either, 1) the soil is disturbed by cultivation or thinning or, 2) conditions continue to favor disease. Apply no closer than a 7-day interval.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p>

**Complete List of Leafy Greens:** Amaranth; Arugula; Cardoon; Celery; Celery, Chinese; Celtuce; Chervil; Chrysanthemum (Edible); Corn Salad; Cress; Dandelion; Dock; Endive (Escarole); Fennel; Florence; Lettuce (Head and Leaf); New Zealand spinach; Orach; Parsley; Purslane; Radicchio; Rhubarb; Spinach; Spinach, vine; Swiss Chard

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

- Specific Use Restrictions**
- 1) Make no more than two applications by air.
  - 2) Do not apply more than 28 oz./A of Cannonball WG per year.
  - 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
  - 4) May be applied on the day of harvest (0-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
Pistachio	Botrytis ( <i>Botrytis</i> spp.)  Alternaria ( <i>Alternaria</i> <i>alternata</i> )	5.5 - 7	Make the first application during early bloom. Repeat applications at 14-day intervals if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

Application Instructions: Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not apply within 7 days of harvest (7-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<p><b>Root and Tuber Vegetables, except Sugar Beet</b></p> <p>Carrot Beet, garden Ginseng Horseradish Parsnip Radish (oriental) Rutabaga Turnip</p> <p><b>Radish</b></p> <p>And cultivars and/or hybrids of these.</p>	<p>Alternaria Leaf Blight (<i>Alternaria dauci</i>)</p>	<p>5.5 - 7</p>	<p>Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.</p> <p>Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.</p> <p>On radish, make no more than two applications per crop</p>

**Additional Root and Tuber Vegetables:** Burdock, edible, Celeriac, Chicory, Salsify (including black and Spanish), Skirret, Turnip-root parsley, and Turnip rooted chervil.

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 0.9 a.i./A of fludioxonil-containing products per plot of land per year.
- 4) Do not allow cattle or other livestock to feed upon the leaves of root vegetables.
- 5) Do not apply within 7 days of harvest (7-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
<b>Root and Tuber Vegetables, Leaves</b>  Beet, garden Beet, sugar Carrot Parsnip Sweet Potato Turnip Yam (true)  <b>Radish</b>	Alternaria Leaf Blight <i>(Alternaria dauci)</i>	5.5-7	Begin applications prior to or at the onset of disease and repeat applications on a 7-10 day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.  On radish, make no more than two applications per crop.

**Complete List of Root and Tuber Vegetables, Leaves:** Beet, garden; Beet, sugar; Burdock, edible; Carrot; Cassava; Celeriac; Chicory; Dasheen; Parsnip; Radish; Radish (oriental); Rutabaga; Salsify (including black and Spanish); Sweet potato; Tanier; Turnip; Turnip rooted chervil; Yam (true)

**Application Instructions:** Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 10 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Radish ONLY - do not apply more than 14 oz. per crop or more than 28 oz./A of Cannonball WG per plot of land per year.
- 3) Do not apply more than 28 oz./A of Cannonball WG per plot of land per year.
- 4) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 5) Do not allow cattle or other livestock to feed upon the leaves of root and tuber vegetables.
- 6) Do not apply within 7 days of harvest (7-day PHI).

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Crop	Disease	Rate oz./Acre	Remarks
<b>Strawberry and Berry, Low Growing Subgroup 13-07G (except Cranberry)</b>  <b>Strawberry</b>  And cultivars and/or hybrids of these.	Gray Mold ( <i>Botrytis cinerea</i> )  Anthracnose ( <i>Colletotrichum</i> spp.)	5.5 - 8	Begin application at or before bloom and continue on a 7-10 day interval.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

**Additional Low Growing Berries:** Bearberry; Bilberry; Cloudberry; Muntries; Partridgeberry; Strawberry

Application Instructions: Application may be made by ground, air, or chemigation. Good coverage is essential for good disease control. Use a minimum of 5 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).

Crop	Disease	Rate oz./Acre	Remarks
<b>Tropical Fruits</b> Avocado Black sapote Canistel Dragon Fruit Longan Lychee Mamey sapote Mango Papaya Pulasan Rambutan Sapodilla Spanish lime Star apple	Botrytis fruit rot ( <i>Botrytis</i> spp.)  Alternaria fruit rot ( <i>Alternaria</i> spp.)  Anthracnose ( <i>Colletotrichum</i> spp.)	5.5 - 7	Make the first application during early bloom and repeat at 7-10 day intervals if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.

Application Instructions: Application may be made by ground or air. Good coverage is essential for good disease control. Use a minimum of 20 gallons/A spray volume by air. Make no more than two applications by air. Make additional applications by ground.

**Specific Use Restrictions**

- 1) Make no more than two applications by air.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).

<b>Watercress</b>	Cercospora leafspot ( <i>Cercospora</i> spp.)  Sclerotinia white mold ( <i>Sclerotinia</i> spp.)  Rhizoctonia rot ( <i>Rhizoctonia solani</i> )	5.5 - 7	Begin applications prior to or at the onset of disease and repeat applications at a 7-10 day interval if conditions remain favorable for disease development.  Resistance Management: After 2 applications of Cannonball WG, alternate with another fungicide with a different mode of action for 2 applications.
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Application Instructions: Application may be made by ground or chemigation. Good coverage is essential for good disease control. For chemigation apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.

**Specific Use Restrictions**

- 1) Applications can be made to a dry bed only. No direct applications to water.
- 2) Do not apply more than 28 oz./A of Cannonball WG per year.
- 3) Do not apply more than 0.9 lb. a.i./A of fludioxonil-containing products per plot of land per year.
- 4) May be applied on the day of harvest (0-day PHI).

## **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

### **Pesticide Storage**

Store in original containers in a cool, dry place. Do not store this product under wet conditions. Handle outer container carefully to avoid breakage of inner water-soluble packets. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, sweep and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

### **Pesticide Disposal**

Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### **Container Handling**

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

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For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, LLC  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300

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[NON-DETACHABLE CONTAINER LABEL]

**GROUP 12 FUNGICIDE**

**Cannonball® WG**

**Fungicide**

Active Ingredient:	
Fludioxonil (CAS No. 131341-86-1).....	50.0%
Other Ingredients:	50.0%
Total:	100.0%

Cannonball WG is a 50% water dispersible granule.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use inside booklet.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-1454

EPA Est.

Net Weight: \_\_\_\_\_

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<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>NOTE TO PHYSICIAN</b>	
If ingested, induce emesis or lavage stomach. Treat symptomatically.	
<b>HOT LINE NUMBER</b>	
For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

**CAUTION**

Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Container Handling**

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix

tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to Environmental Hazards, Ground Water Advisory, Surface Water Advisory, Physical or Chemical Hazards, and complete Storage and Disposal sections in attached booklet.**

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

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Manufactured for:  
Syngenta Crop Protection, LLC  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300

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